In the News

ARMY MAY PURCHASE 95 HAZARD-DETECTING TRUCKS

Lisa Burgess

ARLINGTON, Va.—The Army has obtained permission from the Pentagon to purchase 95 vehicles that will help protect U.S. troops against the modern battlefield's most terrifying trio: nuclear, chemical, and biological weapons, officials said.

The Nuclear, Biological, Chemical Reconnaissance Vehicles, or NBCRV, are the newest members of the Stryker family of tracked combat trucks. This will be the second Army purchase of the vehicles, which are designed by General Dynamics Land Systems as a replacement for the Army's M93-A1 Fox Chemical Reconnaissance Vehicle.

The original purchase of 21 NBCRVs was used to support operational testing, which began in December 2005, according to Army Lt. Col. Jonas Vogelhut, joint product manager for reconnaissance and platform integration at Aberdeen Proving Ground, Md. In April 2007, nine of those trucks were sent to Iraq "as an urgent need," and given to the three deployed Stryker brigade combat teams there, Vogelhut told *Stars and Stripes*. The Army hopes to buy 355 of the vehicles by 2012, Vogelhut said. With the latest in computerized sensor technology, the NBCRV can sample the ground and atmosphere for contamination, whether moving or standing still, and then automatically transmit a digital warning message of possible contamination to follow-on forces.

All seven Stryker brigade combat teams will get three NBCRVs, and each of the Army's heavy brigade combat teams will get two, Vogelhut said. The Army's 40 chemical companies will each get six vehicles apiece, he said. Since the Fox was fielded only to active duty chemical companies, this will be the first time that the National Guard and Army Reserve companies will have their own sensing vehicles, Vogelhut said.

Burgess writes for Stars and Stripes*, Mideast edition.*

INNOVATIVE SCIENCE HELPS TANKERS WORK SMARTER NOT HARDER

Pvt. Naveed Ali Shah, USA

Construction was completed Nov. 20 on an Operational Preservation System for the tanks and Bradleys of the 2nd Battalion, 9th Infantry Regiment, 1st Heavy Brigade Combat Team, 2nd Infantry Division.

The system was installed by the Tank-Automotive Research, Development and Engineering Center, spearheaded by Ali Baziari, team leader.

"It's basically a big dehumidifier," said Baziari. "It's an easily applied, low-cost, high-return technology."

A generator blows warm, dry air into the vehicles via a tubing system attached to one of the tank driver's vision blocks, said Baziari. The tubing is set up so that a total of 14 tanks and 16 Bradleys can be hooked up at any time. The attachments to the vehicles have a sensor to detect the interior level of humidity and temperature so the system can compensate accordingly. It also has a built-in automatic shut-off to prevent overheating, Baziari said.

The warm, dry air prevents condensation from building up in the interior of the tank, which leads to the corrosion of the tank's electronic equipment. Of the damage that occurs from natural wear-and-tear, corrosion is the most expensive and time consuming to repair.

"The Army National Guard and Marine Corps already have this system in place, and we've received very positive feedback," said Paul M. Wiatr, logistics management specialist, 403rd Army Field Support Brigade. "This is one of the reasons that we decided to implement this technology here."

Shah writes for 1st Heavy Brigade Combat Team Public Affairs Office.

DOD ANNOUNCES VENUE FOR WEARABLE POWER COMPETITION

The Department of Defense announced the inaugural $1.75 million Wearable Power Prize Competition will be held at the Marine Corps Air-Ground Combat Center (MCAGCC), Twentynine Palms, Calif., **Sept. 22 until Oct. 4, 2008.**

The Wearable Power Prize Competition was first announced in July 2007. Its 13-day capstone event culminates on Oct. 4 at MCAGCC with a "Power Wear-Off" Competition. The Wearable Power Prize Competition gathers and tests wearable power-generating methods and techniques. The goal is to reduce the weight of power systems that warfighters carry to operate their radios, navigation, weapons, and other gear. Competitors will demonstrate wearable systems that can power military equipment for

96 hours, but that weigh less than half the current battery load.

Finalists, whose entries must produce power on test stands continuously for 88 hours, will wear their power systems in field conditions, testing their ability to work when in motion and exposed to weather.

The first place team meeting the required energy requirements will win $1 million for building the lightest weight system that generates 20 watts average power for 96 hours (including the "wear-off"). The second place team will win $500,000, and the third place team, $250,000. A total of 169 teams have registered for the competition.

The Wearable Power Prize Competition is sponsored by the director, Defense Research and Engineering. William S. Rees Jr., deputy under secretary of defense for laboratories and basic sciences, is responsible for overseeing the competition.

"We are pleased to host this competition because it directly addresses one of the real, growing problems of our ground warriors," said Brig. Gen. Melvin Spiese, commanding general, MCAGCC.

"This competition focuses the ingenuity and creativity of inventors, scientists, engineers, and students on finding the best light-weight, wearable power systems," says Rees. "It makes sense to compete at Twentynine Palms, a place that replicates many of the real-life conditions our warfighters face everyday. I thank Gen. Spiese and his leadership team for recognizing the value of this competition and helping us move it forward. We are eagerly looking forward to this exciting and successful event."

On the final day of the competition, the top three competitors that demonstrate a complete, wearable system that produces 20 watts average power for 96 hours and weighs less than 4 kilograms ($\sim$8.8 pounds) will be determined.

For more information about the competition, visit <www.dod.mil/ddre/prize>.

ARMY NEWS SERVICE (JAN. 7, 2008)
LOGISTICS MODERNIZATION TRANSFORMS BUSINESS PRACTICES

Jacqueline Boucher

TOBYHANNA ARMY DEPOT, Pa.—Tobyhanna is in the final stages of integrating the Army's Logistics Modernization Program, which has introduced business processes that are consistent with current industry standards.

The LMP multi-year transformation, begun in December 1999 to modernize logistics and the supporting information technology to meet current and future military readiness requirements, is scheduled for completion in March 2009.

"There's no doubt it's been a difficult transition, but as the system matures, people will be pleasantly surprised at the amount of information available to make our work easier," said Frank Zardecki, deputy depot commander.

"There are over a half a million data points resident in the system that will make manual reporting and analysis of program status a thing of the past. We are a very unique business, and as we continue to grow, we cannot survive without advanced enterprise resource planning systems."

Officials here are using a Web-based enterprise resource planning system to link the depot's business practices so that users can share information with the click of a mouse. The ERP is a framework for organizing, defining, and standardizing business processes. It's a one-stop-shop concept that replaces hours of research and information verification with accurate, real-time data.

"People who use the ERP system can find information in one place," said Jim Antonelli, assistant program officer, Master Production Schedule Office. "The ERP brings together the various elements of being able to do planning for an organization, whether it's material planning, demand planning, or capacity planning."

Tobyhanna's commander is committed to integrating LMP into all aspects of the depot's business processes.

"We are engaged in an enormous task to modernize the Army's logistics and maintenance systems. This is bigger than Tobyhanna and even Army Materiel Command—it impacts the entire army logistics and maintenance systems from the foxhole to the strategic industrial base," said Col. Ron Alberto, depot commander.

"As the Army's LMP prototype, it is our task, and we must embrace this responsibility in order to move Tobyhanna, all depots, and the Army logistics system into the 21st century. The objective is to maintain the highest effectiveness while providing service to the warfighter," he said. "It is imperative that depot employees embrace the cul-

tural, system, and process changes that come with LMP. It is a challenge and mission we must meet head on and overcome."

LMP staff members noted that transformation is necessary if the depot is to continue being competitive in this industry.

"We have a lot of confidence in the ability of the system to do the job as advertised," said Ted Bienkowski, prototype team leader.

"We're starting to see benefits from what we did with the material organizations [in the early stages of the transformation]. The ERP allows us to better meet deadlines and provides for more reliable schedules. It also helps us project our people requirements and provide more valid numbers," he said.

Transforming Tobyhanna's business practices from 1970s logistics technology and 30-year-old processes has not been easy. Since introducing the system in 2003, the LMP team members have overcome obstacles such as learning how to use the complex ERP system, introducing cultural changes to the general depot population, and getting people to understand the level of data quality that's required.

Bob Edmunds started working with LMP about three years ago. "This initiative [LMP] is a huge transformation," he said. "The future of the depot depends upon its successful implementation, and the challenges it presents are significant." Edmunds is the branch chief for the materiel accountability and analysis branch, materiel management division, production management directorate.

"It's not simply software; it's a re-engineering of our business processes, and we need to communicate to everyone involved the benefits of using an ERP system," he said.

If asked, Bienkowski and Antonelli readily admit they have faith in the LMP philosophy. "We're believers," they said. "Now we can do things in a cool, calculated, and methodical way that makes everyone's job easier."

Both men agree LMP is a mindset. According to them, it's not just a system, but an entire philosophy on how to run a business.

"We're heading toward cutting-edge technology," Bienkowski said. "There's so much promise in this system."

The Army chose Systems Applications and Products in Data Processing to develop an ERP system to bring its business practices more in line with industry standards. SAP is a business software company that develops resource planning solutions for companies around the world.

Computer Science Corporation further tailored the ERP system to meet the special needs of the Army.

"When we originally brought the system in, we tried to alter it to fit our existing business processes and it didn't work too well," Antonelli said, explaining that change was necessary for the depot to get the most out of the complex system. "The depot wasn't gaining any benefits from all the good tools available in the ERP system."

Furthermore, Antonelli noted that the LMP team wasn't savvy on system's capabilities. "We had to educate ourselves, and as we got smarter, we realized we could do so much more with the software."

The software features processes that have been refined over the years to be the best business processes in the industry.

"Tobyhanna is making a quantum leap to catch up with industry," Bienkowski said. "I can't believe how much we've learned."

The master production planning team has received extensive fundamental education in ERP and association of operation management. The team is also engaged in continuing education that will lead to certification.

"We're juggling a lot as we [the depot] grow and move the organization into the future," noted Antonelli.

The LMP team consists of about 30 people who develop new business processes and guide the implementation of those processes.

"These people are great," said Antonelli. "They became experts in the system while attending training and conducting workshops for depot employees."

The Army's industrial base, arsenals, and depots will use Tobyhanna's transformation as a benchmark while developing their LMP processes.

"Tobyhanna is the prototype installation implementing what the Army refers to as enterprise expansion, of which

our LMP system is a part," Antonelli said. "What we do here will be the standard all other Army depots and arsenals will follow as they roll out LMP."

The second deployments at Corpus Christi Army Depot, Texas; Letterkenny Army Depot; and U.S. Army Aviation and Missile Command, Redstone Arsenal, Ala., are tentatively scheduled for the second quarter of 2009. Data quality, legacy systems, and new concepts were a few of the challenges logistics experts faced while integrating the ERP system.

"Our biggest challenge is being one of the prototype sites—there's no roadmap for us to follow," Edmunds said. "We're blazing our own trail and learning as we go.

"Data quality is another significant challenge," he added. "Legacy systems did not force data integrity across business disciplines; LMP demands it."

Another major challenge is trying to re-educate employees and get them to accept change, according to Linda Caso, production controller in the manufacturing scheduling division.

"When everyone is trained properly and they understand why they are doing this, it becomes obvious that everyone will benefit from this [LMP]."

Caso was on hand to witness the December roll out and observed first hand the benefits of the new system. "In my opinion, it's a win-win situation for both the customer and Tobyhanna," Caso said. "The system is designed to have material at arm's length as opposed to waiting weeks and sometimes months for deliveries. The shops are gainfully employed and, in turn, this satisfies the customer because they are getting a quality product in a timely fashion."
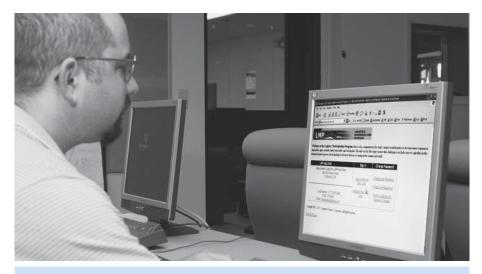
The ERP is being introduced one directorate at a time. The material management division in the production management directorate started using the material management portion of the material requirements plan in December.

It's going to take 18 months to roll out the rest of the depot, according to Bienkowski. The next phase will launch a prototype for the TSC-93 and TSC-85 weapons systems in the satellite communications division, communication systems directorate.

"The prototype will exercise the system to see if all the business processes that we've developed over the past year work," said Antonelli. "It will give us an opportunity to see where we need to make changes and tweak processes."

The prototype is scheduled for completion in December, and the rest of CS will come online in January. Antonelli explained that if all goes well, other depot organizations will roll out every two months: systems integration and support directorate, followed by command, control and computer/avionics directorate, and lastly, intelligence, surveillance and reconnaissance directorate.

AMERICAN FORCES PRESS SERVICE (JAN. 7, 2008)
NEW HELMET SENSORS TO MEASURE BLAST IMPACT
Donna Miles

FORT BELVOIR, Va.—Soldiers from the 101st Airborne Division preparing to deploy to Afghanistan are being issued sensors that attach to their helmets to measure the impact from blasts, roadside bombs, and other activities.

Gary Roberts helps design the business processes and procedures that Tobyhanna Army Depot will use once master production scheduling is implemented. Roberts is a Logistics Modernization Program (LMP) production controller and member of the depot's master production scheduling team.   Photo by Steve Grzezdzinsks

About 1,200 "Screaming Eagles" already have the new sensors, and the rest will receive them within the next month, said Maj. William Schaffer, a product manager in the Army's Program Executive Office Soldier, based at Fort Belvoir.

Meanwhile, troops from the 4th Infantry Division are scheduled to receive helmet sensors with similar capabilities before their deployment to Iraq this fall, Schaffer said.

The sensors gather data on impacts ranging from a dropped or kicked helmet to a vehicle crash to a nearby weapon firing or explosion, Schaffer explained. They measure two specific actions: the energy wave generated by the event and the acceleration or jolt that follows.

In the short term, data collected through the sensors are expected to help the Army improve the helmets and other protective equipment it provides its soldiers, Schaffer said.

A longer-term application—one Schaffer emphasized the medical community isn't yet ready for—is to use impact data to help diagnose traumatic brain injuries.

"With the number of IEDs that we're seeing in Iraq and the traumatic brain injury that's coming out of it, obviously, somewhere down the line, we are looking at correlating the blast and the injury," he said. "But in the near term, we are looking at developing a more protective piece of equipment. The advanced combat helmet we have out there is the best in the world, but we are always looking at ways to make our products better, and this is a great way to start."

Army Maj. William Schaffer in the Program Executive Office Soldier at Fort Belvoir, Va., displays a Kevlar helmet with an externally mounted sensor that collects blast data, and the sensor itself. The 101st Airborne Division is receiving the sensors before deploying to Afghanistan. *Photo by Donna Miles*

Gen. Richard A. Cody, Army vice chief of staff, ordered the helmet sensor program in June. Three months later, the Program Executive Office Soldier had come up with several potential helmet sensors and was putting them through extensive testing at Aberdeen Proving Ground, Md.

Within six months of getting its marching orders, officials narrowed the field to the most promising models: one mounted externally and one internally. "We came up with two of the best sensors, and we're now preparing to field both of those," Schaffer said.

The model going to the 101st Airborne Division attaches to the back of the advanced combat helmet, protected by a hardened casing that is covered by a camouflage flap. It weights about 6 ounces and has a six-month battery life. The sensor remains in a "sleep" mode, automatically turning itself on and capturing data from an event, then turning itself off. It has enough memory to store data on 527 events.

To harvest information from the sensor, a soldier simply connects it to a computer using a USB port, hits "save," and sends the data to a secure database.

An internally mounted model to be fielded to the 4th Infantry Division sits under the padding in the crown of the helmet. It has a rechargeable battery, but otherwise has the same capabilities as the externally mounted sensor.

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"One is protected by the helmet itself, and one by the hardened casing around it," Schaffer said. "Both measure impact and acceleration."

Initial input from 101st Airborne Division soldiers shows they are happy to play a part in helping the Army improve its helmet protection, Schaffer said. He noted that many of the soldiers have experienced blasts or accelerations during past deployments and recognize the value of the sensor technology in developing the next-generation combat helmet.

"This shows everybody that the Army cares," Schaffer said. "We have got the best equipment in the world, but we are not resting on our laurels. We are always looking forward, always looking for the next generation of protective equipment to take care of the soldiers."

Miles writes for American Forces Press Service.

ARMY NEWS SERVICE (JAN. 17, 2008)
ARMY, NAVY, COAST GUARD TO SHARE BUSINESS TRANSFORMATION CAPABILITIES

In a ceremony Jan. 15 at Coast Guard offices in Rosslyn, Va., the U.S. Army, the Department of the Navy, and the U.S. Coast Guard signed a joint memorandum of understanding formalizing an agreement to share capabilities for business transformation.

This agreement was signed by Michael Kirby, deputy under secretary of the Army for business transformation; Anita Blair, deputy assistant secretary of the Navy for total force transformation and acting assistant secretary of the Navy for manpower and reserve affairs; and Rear Adm. Jody A. Breckenridge, director, strategic transformation team, U.S. Coast Guard.

The Army and Navy first signed a memorandum of understanding making formal a data-sharing agreement for workload performance in November 2007. This agreement also formalized use of the unified Army and Navy Data Center in Fairfield, Calif., referred to as the Business Innovation Center.

The data sharing agreements are critical to business transformation, allowing each Service to leverage best practices while reducing costs associated with research and development, and gain a better understanding of technology and how it can be applied across the Service's enterprise.

Besides the sharing of the Business Innovation Center, some of the programs or processes to be shared are applications of organizational design, case studies gained from use of Lean Six Sigma, use of executive management and decision support tools, shared business transformation-oriented contracts, and outcomes from various workload and performance capabilities.

MEDICAL COMMUNICATIONS FOR COMBAT CASUALTY CARE (MC4) PUBLIC AFFAIRS
DEPLOYED NURSES PROVIDE HEAVY LIFTING FOR THE DIGITAL MEDICAL RECORD

Bill Snethen

In the emergency room of a combat support hospital (CSH) in Afghanistan, a multi-disciplinary team assesses a soldier's wounds before being transferred to the operating room. In an intermediate care ward (ICW) in Iraq, nurses keep a watchful eye on a soldier prior to his evacuation to Landstuhl, Germany. Meanwhile, a team of nurses treat severe dehydration at a forward deployed outpatient clinic in Kuwait.

Throughout Southwest Asia (SWA), nurses remain at the hub of activity in medical treatment facilities (MTFs). They shoulder the heavy load of treating sick and injured patients, mobilizing soldiers from litters to beds, running down lab results, and shuffling orders from one end of a hospital to another.

Next to administering care, nurses are charged with capturing critical pieces of information. Given this responsibility, any nurse will admit that charting patient care is far from their favorite duty. Few will disagree how important it is that the patient's information be recorded and shared.

"One of the downsides to medical care is that no one likes to chart patient care since it takes away from the time we could spend helping other patients," said Army Capt. Kara Beattie, an emergency room nurse previously deployed to Baghdad, Iraq, with the 10th CSH. "But having this information allows others to know what treatments have been given. This can also provide insight of what care still needs to be done."

Today's standard for recording patient information is electronic, where medical teams can access data easily and immediately, where results are delivered without flight of foot, and where supervisors can mine legible data and output reports to pinpoint trends. This standard has already

spread to tented hospitals, aid stations, and mobile clinics overseas—more than 200 MTFs to be exact.

Army-issued laptops, handhelds, servers, and printers reside in every level three MTF and outlying Army and Air Force treatment facilities in SWA. These systems, called Medical Communications for Combat Casualty Care (MC4), provide the deployed medical workforce with a means of digitally recording patient information in communications-challenged environments.

When connectivity is present, they transfer patient information to a worldwide accessible database, providing commanders with a medical situational awareness capability they never had before. But the success of the system relies solely on the users, placing nurses directly in the crosshairs. Their efforts using MC4 have contributed to the collection of nearly 3 million medical records. Also having the ability to check patient data electronically to administer timely care has proven to be a benefit over paper-based methods.

"We had a patient admitted to the ICW for gastroenteritis, and the doctor ordered some routine labs, including a complete blood count," said Army 1st Lt. Mary Miller, nurse with the 325th CSH in Al Asad, Iraq. "I was able to quickly access the electronic lab results and noticed this patient had a very low hemoglobin and hematocrit. The patient was able to receive care for anemia in a timely manner. Had I waited for a printout of the results, the treatment could have been delayed."

Having the ability to view a patient's deployed medical history enables every member of the medical team to make the best informed decision by seeing the big picture, thus improving continuity of care.

"One patient had a bruise on his back, and we noted this in the record," Beattie said. "It turned out to be a bruised kidney. Having this information in the EMR [electronic medical record] allowed other providers to watch the situation and test for additional injuries."

The use of EMRs also helps eliminate records being lost in transit, thus eliminating the chance for redundant or unnecessary procedures.

"I think that it's our job as a health care team to ensure that *that* information travels with *that* patient wherever they may go," Beattie said. "EMRs allow nurses and physicians in a multi-disciplinary team to make clear decisions on the care being administered to our soldiers as they go through the various health care facilities before they get back home."

While the collection of EMRs adds to the workload, nurses understand the importance of taking the time to electronically capture all of the patient data, especially on the battlefield.

"We're the advocate for the soldier," Beattie said. "We're the ones making sure that a soldier's injuries and treatments are documented accurately so that the additional health care they receive is appropriate and accurate based upon the medical history. EMRs have allowed us to do that in such a way that is unbelievable. We have that opportunity to impact a soldier's life, not only on the battlefield but all the way into retirement or medical retirement. And if we don't do that, we're not doing our jobs as health care providers."

Snethen writes for Medical Communications for Combat Casualty Care (MC4) Public Affairs.

AIR FORCE PRINT NEWS (JAN. 24, 2008)
AIR FORCE DEVELOPS FRIEND VS. FOE IDENTIFICATION SYSTEM
Mindy Cooper

WRIGHT-PATTERSON AIR FORCE BASE, Ohio—Air Force Research Laboratory officials recently developed a technology that helps identify friendly forces during combat exercises.

Working with Lumitex Inc., of Strongsville, Ohio, members of AFRL's materials and manufacturing directorate developed and fielded the Target Recognition Operator Notification, or TRON system, which has the potential to save lives and increase combat effectiveness.

"Responding to established needs, the materials and manufacturing directorate partnered with Lumitex Inc., to further develop methods established by the Army," said Air Force 1st Lt. TJ Turner, the lead engineer for combat support technology. "Lumitex Inc., produced a fiber-optic cloth that materials and manufacturing directorate researchers realized could be used to develop a more accurate system of identification."

The directorate acquired the fiber-optic cloth and worked closely with Lumitex and user groups to create the TRON system and produced 108 prototypes in a period of six months. The directorate used funds from their company grade officers' initiative program, which provides lieutenants and captains the opportunity to receive funding to

work on a special project outside their core technology area.

TRON is comprised of Lumitex' patented thin and flexible fiber-optic-woven cloth cut to military specifications. The sheets of the fiber-optic cloth are laminated into layers and can be formed into lighting devices of multiple shapes and sizes. The woven nature of the cloth emits light in a controlled way, creating a uniform light-emitting surface, Turner said.

Officials said they expect the technology to be inexpensive and rapidly transferable to the field. It has a long battery life, running 200 hours on two AA batteries, and weighs less than 3 ounces. The system can be worn under the clothes, on outer tactical vests, on an arm, or mounted to a helmet.

"The TRON I system was first tested at the Team Patriot exercise at Volk Field, Wis.," Turner said. "Feedback from Army aviation units showed that the system clearly allowed them to identify friendly forces on the ground. Design changes were also suggested by Army and Air Force personnel, which will lead to the future development of TRON. The improved system includes a better electronics package, modified flash rates, and a new case design."

After the initial TRON evaluation, Air Force Special Operations Command members requested that larger units be made to identify friendly positions during close-air-support operations. This system, known as TRON III, is made of the same fiber optic cloth but has six times the brightness of TRON I. It hooks into a vehicle's power supply, so there is no need for an external power supply.

It is brightly colored for daytime recognition as well. This prototype was developed as a joint effort between the materials and manufacturing directorate, which decided on the specifications, and Lumitex, which built the system. TRON III was developed and put in the field for testing three months after the need was established.

"Currently, TRON I and III are being used in deployed locations, and were used at Red Flag, a joint air operation exercise held at Nellis Air Force Base [Nev.]," Turner said. "In real world conditions, TRON I was used to successfully mark and cordon an unused improvised explosive device, enabling a bomb disposal team to come in and quickly identify and destroy it. It has also been used in over 40 close-air support missions. TRON III has been used for at least two successful close-air support missions."

Cooper is with Air Force Research Laboratory.

Air Force 1st Lt. TJ Turner is shown through night-vision goggles holding Target Recognition Operator Notification III (left) and TRON I in January near Bagram Air Base, Afghanistan. Air Force Research Laboratory officials partnered with the civilian industry to develop the identification system to save lives and enhance combat effectiveness. Turner is a member of the 455th Expeditionary Mission Support Group.   *U.S. Air Force photo*

In the News

SOLDIERS TRY OUT IMPROVED BODY ARMOR

Maj. Wayne Marotto, USA

BAUMHOLDER, Germany—For as long as the Army has used Interceptor Body Armor, soldiers have complained that it is too heavy, too hot, and too cumbersome.

But those complaints may be a thing of the past for soldiers in U.S. Army Europe's 2nd Brigade Combat Team, 1st Armored Division. Those soldiers recently donned the Army's newest body armor—the Improved Outer Tactical Vest.

"The IOTV is a lot more comfortable because of the mesh lining inside," said Sgt. Brian Freeman, a tanker with 2nd BCT's 1st Battalion, 35th Armor. "The waist strap also makes it fit better by redistributing the weight off my shoulders and moving it around my waist."

Freeman ought to know. He deployed with the 2nd BCT for the first iteration of Operation Iraqi Freedom carrying woodland camouflage pattern IBA.

"We didn't even get small arms protection insert plates until the fifth month in country," said Freeman. "I like the mesh lining; it makes it more comfortable."

The mesh is intended to keep the wearer's body cooler by improving ventilation.

The IOTV is the Army's latest evolution of body armor designed to protect the soldier's torso area.

According to information released by the Army's Program Executive Office Soldier, the agency in charge of developing and fielding new equipment, the IOTV meets PEO Soldier's goals of providing troops the most advanced protective gear available, while also improving comfort and mission effectiveness.

The Army spent a good deal of time asking soldiers for suggestions and feedback about existing body armor, and then tested new designs based on their responses.

As a result, the IOTV has several advantages over its predecessor. It is three pounds lighter; it provides more coverage in the small of the back; it sits higher around the armpit area; and it sits lower on the torso, said Tony Perez, Team 5 fielding leader for Engineering Solution Products,

the contractor selected by the Army to field the IOTV to the 2nd BCT.

Perez noted that the new design addresses one of the biggest complaints about earlier body armor models—that the addition of side small arms protective insert body armor plates forced the soldier's arms awkwardly away from his body.

"The side plates on the IOTV are in a better position, decreasing the profile and allowing better arm movement," Perez said.

Brigade soldiers who tried on the IOTV called it a welcome improvement.

"The IBA had zero cushioning inside, especially on the shoulders," Freeman said. "The IOTV fits better and it has a quick release, which makes it better than the IBA."

The quick-release cable feature allows soldiers to get out of the IOTV with one pull by disassembling the vest into two parts that fall to the ground. That innovation should help a soldier get out of the IOTV quickly when needed—such

Army Sgt. Brian Freeman pulls the quick-release cable on Army Sgt. William Huff's Improved Outer Tactical Vest during a training session for soldiers of U.S. Army Europe's 2nd Brigade Combat Team, 1st Armored Division in Baumholder, Germany, Jan. 23. The quick-release, one of several improved features of the new armor, is designed to allow the wearer to quickly remove the IOTV when needed. 2nd BCT soldiers are being issued the IOTV in preparation for the brigade's planned deployment to Iraq in the spring.
Photo by Maj. Wayne Marotto, USA

In the News

as when a military vehicle rolls over into water—allowing the soldier to escape the submerging vehicle or be pulled more easily to safety. The quick release should also help medics to treat injured or wounded soldiers quickly.

Pfc. Tony Gonzales, a tank driver for 1-35th Armor, said the IOTV "is a lot better, because it fits better around the body and is more comfortable."

Pfc. William Fraleigh, an infantryman from the 2nd BCT's A Company, 1st Battalion, 6th Infantry, conceded that the IOTV allows for better flexibility and movement, and even admitted that the quick-release could prove invaluable if needed during an emergency. But giving up his IBA will be like throwing away a comfortable pair of old shoes, and he was a bit superstitious about the idea.

"It always worked for me in combat, and I felt comfortable in it," said Fraleigh.

"I liked the IBA better, because it is easier to put on than the IOTV. I don't like the emergency quick-release, because it might get snagged on something during a patrol and the body armor comes undone. You don't have time to put it back together while patrolling."

The 2nd BCT continues its preparation for its scheduled spring deployment to Iraq.

Marotto is the public affairs officer for 2nd Brigade Combat Team, 1st Armored Division.

DEPARTMENT OF DEFENSE NEWS RELEASE (JAN. 28, 2008)
FISCAL 2008 NEW START AND ADDITIONAL FISCAL 2007 JOINT CAPABILITY TECHNOLOGY DEMONSTRATIONS ANNOUNCED

The Department of Defense announces the selection of seven Joint Capability Technology Demonstration (JCTD) projects for fiscal 2008 and three JCTD projects that started at the end of fiscal 2007.

Fiscal 2008 New Starts

Combat Autonomous Mobility System (CAMS)

Autonomous, ground-mobile system that leverages manpower for Special Operations Forces
- Combatant Command/User Sponsor: U.S. Special Operations Command (USSOCOM)
- Transition Service/Agency: U.S. Army Special Operations Command

- Project Oversight: Office of the Secretary of Defense/ Director, Defense Research & Engineering/Advanced Systems and Concepts (OSD/DDR&E/AS&C)

Communications AirBorne Layer Expansion (CABLE)

Integrated Services airborne communications relay and gateway effort to provide seamless mesh network environment for data, voice, and Internet Protocol (IP)-based networks
- Combatant Command/User Sponsor: U.S. Strategic Command (USSTRATCOM)
- Transition Service/Agency: Navy and Air Force
- Project Oversight: OSD/DDR&E/AS&C

Collaborative Online Reconnaissance Provider/ Operationally Responsive Attack Link (CORPORAL)

Scalable, IP-based, plug and play open architecture tailored to the ground warfighter for critical information sharing
- Combatant Command/User Sponsor: U.S. Central Command (USCENTCOM)
- Transition Service/Agency: Marine Corps
- Project Oversight: OSD/DDR&E/AS&C

Hard Target Void-Sensing (HTVS) Fuze

Void-sensing, cockpit-programmable, and BLU-109/113/122 warhead-compatible fuze that functions in greater than 10,000 pounds-per-square-inch concrete
- Combatant Command/User Sponsor: USSTRATCOM
- Transition Service/Agency: Air Force
- Project Oversight: OSD/DDR&E/AS&C

Joint Force Protection Advanced Security System (JFPASS)

Integrates and automates access control and perimeter security for expeditionary military installations
- Combatant Command/User Sponsor: U.S. European Command (USEUCOM)
- Transition Service/Agency: Army
- Project Oversight: OSD/DDR&E/AS&C

Multi-Function Threat Detector (MFTD)

Affordable hostile fire indicator with threat classification
- Combatant Command/User Sponsor: USCENTCOM
- Transition Service/Agency: Navy
- Project Oversight: OSD/DDR&E/AS&C

Shadow Harvest (Classified)

Obscured target mitigation via a rapidly tailorable multi-intelligence on-board package
- Combatant Command/User Sponsor: U.S. Southern Command
- Transition Service/Agency: Air Force
- Project Oversight: OSD/DDR&E/AS&C

In the News

Three additional Fiscal 2007 New Starts

Global Observer (GO)

High-altitude, long-endurance, liquid hydrogen-powered unmanned aerial vehicle
- Combatant Command/User Sponsor: USSOCOM and USSTRATCOM
- Transition Service/Agency: USSOCOM
- Project Oversight: OSD/DDR&E/AS&C

Joint Surface Warfare (JSuW)

Integrated multiple airborne Intelligence, Surveillance, and Reconnaissance and strike platforms with dynamic retasking of existing stand-off weapons for maritime interdiction
- Combatant Command/User Sponsor: U.S. Pacific Command
- Transition Service/Agency: Army
- Project Oversight: OSD/DDR&E/AS&C

Zephyr

Joint, real-time, battlefield persistent surveillance and communications via an extended-duration, solar-powered, unmanned aerial vehicle
- Combatant Command/User Sponsor: USCENTCOM and USEUCOM
- Transition Service/Agency: TBD
- Project Oversight: OSD/DDR&E/AS&C

The JCTD business model, entering its third year, completely replaced the ACTD model in fiscal 2007 to rapidly move advanced technology and innovative concepts into the hands of warfighters in the field. Building on the successful ACTD model in which new operational concepts are combined with maturing technologies in a joint environment, JCTDs focus more on tailoring projects to a combatant commander's specifically identified needs—emphasizing "needs pull" over historical "technology push."

A JCTD enables faster project start-up by providing more resources earlier in the traditional two-year DoD budget cycle and a flexible start process that facilitates urgently needed combatant command-driven capabilities throughout the fiscal year. One key aspect of the JCTD program is the enhanced transition planning process, which seeks to deliver enduring capabilities to the combatant commands.

The JCTD program also demands faster fielding of interim capabilities; structures funding to provide incentives for military service and agency participation without requiring the Services or agencies to fund from their existing programs; and provides Services and agencies clear visibility in their participation of joint efforts.

For more information on the ACTD/JCTD programs, visit < www.acq.osd.mil/jctd/ > and go to "FY08 New Start Project Summaries."

PROJECT MANAGER, DEFENSE COMMUNICATIONS AND ARMY TRANSMISSION SYSTEMS PRESS RELEASE (FEB. 12, 2008)
PRODUCT MANAGER, DEFENSE WIDE TRANSMISSION SYSTEMS CONNECTS ARMY LOGISTICIANS WITH 1,000TH CSS VSAT

Stephen Larsen

SPRINGFIELD, Va.—The program to connect Army logisticians with their own, dedicated communications system reached a significant milestone when the 1,000th combat service support very small aperture terminal (CSS VSAT) rolled off the assembly line at the plant of L-3 Global Communications Solutions, Inc. (GCS) in Victor, N.Y., on Jan. 9, 2008.

The program, managed by the product manager, Defense Wide Transmission Systems (PM DWTS)—part of the Army's Program Executive Office, Enterprise Information Systems' Project Manager, Defense Communications and Army Transmission Systems (PM DCATS)—started in May 2004 as the solution to the Army G-4's (deputy chief of staff logistics) number-one priority after Operation Iraqi Freedom I to connect logisticians with their own communications system to pass requisitions, and at the same time eliminate the need for soldiers to go in harm's way in convoys to hand-carry requisitions.

Some 90 Army leaders and their industry partners met at a PM DWTS facility on Jan. 31, 2008, to mark the milestone.

Borrowing an analogy he heard from former Army Chief of Staff Gen. Peter Schoomaker, Thomas Edwards, assistant deputy chief of staff, Army G-4, compared the early process of trying to connect Army logisticians to "slogging through a swamp," and said that for the G-4, the CSS VSAT solution was like "jumping out of a swamp and onto a rocket ship.

"The number one logistics issue out of the war [Operation Iraqi Freedom] was to connect the logistician," said Edwards. "You can't run a distribution system if you don't know what the user wants. If you [the CSS VSAT govern-

ment and industry team] hadn't been able to step up and make that happen, we'd still be on the sidelines. You have my personal and enduring thanks for that."

Maj. Jeff Etienne, the assistant product manager, DWTS-Belvoir, told the group the history of the CSS VSAT program, from the first generation of 18 prototype units in March 2004 that utilized a 0.96 meter dish to the current fourth generation 1.2 meter Hawkeye II-enhanced units that were fielded starting with the 901st unit in November 2007. He said soldiers' demand for CSS VSATs continues to increase because the technology allows users to share documents, pass requisitions, collaborate and conduct meetings online, and make voice over Internet Protocol telephone calls—all without moving from their location.

Also Connects Medical, Biometrics, and Homeland Security Users

Lt. Col. Clyde Richards, PM DWTS, said that the factory-to-foxhole Internet capability enabled by CSS VSATs provides information dominance for CSS warfighting units and noted that, in addition to connecting logisticians, CSS VSATs also save soldiers' lives by digitally transporting medical supply and casualty-care transactions, and sup-

port force protection by digitally transporting biometrics and homeland security transactions. "We've also provided VSATs to support disaster relief efforts, such as we did after Hurricane Katrina," said Richards.

Emphasizing that his objective as a PM was to provide a faster, better, and cheaper system, Richards said that he was proud that the PM DWTS and industry team had worked together to reduce the cost of individual CSS VSATs by 35 percent and to make process improvements, such as doing quality inspections at the vendor's plant and shipping directly from there to users. "I also want to tell you that, operationally, we have not lost one single VSAT out of 1,000," said Richards.

Richards said that the original requirement from the G-4 was for 775 CSS VSATs, that there were 1,000 more in the pipeline, and that the figure could ultimately grow to 3,000 CSS VSATs.

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A Six-pack of Tips for Defense AT&L Authors

1 Look at back issues of the magazine. If we printed an article on a particular topic a couple of issues ago, we're unlikely to print another for a while—unless it offers brand new information or a different point of view.

2 We look on articles much more favorably if they follow our author guidelines on format, length, and presentation. You'll find them at < www.dau.mil/pubs/dam/DAT&L % 20author % 20 guidelines.pdf >.

3 Number the pages in your manuscript and put your name on every page. It makes our life so much easier if we happen to drop a stack of papers and your article's among them.

4 Do avoid acronyms as far as possible, but if you must use them, define them—every single one, however obvious you think it is. We get testy if we have to keep going to acronym

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